Electronic Acknowledgement Receipt			
EFS ID:	1417607		
Application Number:	10810660		
International Application Number:			
Confirmation Number:	1130		
Title of Invention:	Structure of a micro electro mechanical system and the manufacturing method thereof		
First Named Inventor/Applicant Name:	Wen-Jian Lin		
Customer Number:	59747		
Filer:	Ryan Edward Melnick/Ji Kim		
Filer Authorized By:	Ryan Edward Melnick		
Attorney Docket Number:	QCO.091A/061121		
Receipt Date:	04-JAN-2007		
Filing Date:	29-MAR-2004		
Time Stamp:	18:37:39		
Application Type:	Utility		
Payment information:			

### Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	\$180
RAM confirmation Number	752
Deposit Account	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
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1	Information Disclosure Statement (IDS) Filed	QCO_091A_IDS.pdf	73750	no	2
Warnings:					
Information	:				
This is not an	USPTO supplied IDS fillable form				
2	Foreign Reference	QCO_091A_ref.pdf	817917	no	10
Warnings:	-				
Information	:				
3	Foreign Reference	QCO_091A_ref2.pdf	3763012	no	85
Warnings:					
Information	Information:				
4	Fee Worksheet (PTO-06)	fee-info.pdf	8212	no	2
Warnings:					
Information	:				
		Total Files Size (in bytes):	46	662891	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

# Compared /contrasted to the ISSA ELITE COACH COURSE, STRENGTH& CONDITIONING, A SPECIAL FOCUS ON BODYBUILDING

Here is a comparison and contrast of the ISSA Elite Coach Course (with Strength & Conditioning, and a special focus on Bodybuilding) versus the IFBB Master Bodybuilding & Fitness Degree:

#### **Comparison Table**

Feature/Aspect	ISSA Elite Coach Course	IFBB Master Bodybuilding &
	(Strength & Conditioning + Bodybuilding Focus)	Fitness Degree
Provider	International Sports Sciences Association (ISSA)	International Federation of Bodybuilding and Fitness (IFBB)
Accreditation	DEAC (Distance Education Accrediting Commission), widely recognized	IFBB (industry-specific, not accredited by NCCA/DEAC)
Course Format	Online, self-paced, with practical experience encouraged	Online, self-paced, PDF/video materials
Core Focus	Strength & Conditioning, Bodybuilding, Nutrition, Coaching	Bodybuilding, Fitness, Coaching, Advanced Training
Specialization	Bodybuilding, Nutrition, Strength & Conditioning, Business Skills (in bundles)	Bodybuilding, Fitness, Advanced Coaching
Practical Experience	Strongly encouraged, with internships and client work	Emphasized, but not required for certification
Certification Recognition	Widely recognized in fitness industry, valued by employers	Recognized within bodybuilding/fitness community
CEUs/Recertification	Offers CEUs, supports recertification	Not specified for CEUs, primarily for credentialing

Course Bundles	Includes multiple certifications (e.g., CPT, Nutrition, Strength & Conditioning, Bodybuilding)	Standalone or as part of IFBB Academy offerings
Content Depth	Comprehensive, covers anatomy, nutrition, program design, injury prevention, business	Comprehensive, focuses on bodybuilding science, technique, and coaching
Target Audience	Personal trainers, strength coaches, bodybuilding coaches, athletes	Bodybuilding coaches, athletes, fitness professionals

#### **Key Similarities**

- Online Learning: Both are fully online and self-paced, making them accessible to a global audience.
- **Comprehensive Curriculum:** Both cover anatomy, nutrition, program design, injury prevention, and coaching techniques.
- **Practical Application:** Both emphasize real-world application and coaching skills.
- **Industry Recognition:** Both are respected within their respective communities— ISSA in the broader fitness industry, IFBB in bodybuilding and fitness coaching.

#### **Key Differences**

- **Accreditation:** ISSA is accredited by DEAC, which is widely recognized in the U.S. and internationally [4][5][6]. IFBB is recognized within the bodybuilding community but not by traditional accrediting bodies.
- **Course Bundles:** ISSA offers bundled certifications (e.g., Elite Trainer includes CPT, Nutrition, Strength & Conditioning, and more)<sup>[7][8]</sup>. IFBB typically offers standalone or specialized bodybuilding/fitness degrees.
- **Practical Experience:** ISSA strongly encourages hands-on experience with clients, including internships<sup>[4]</sup>. IFBB emphasizes practical knowledge but does not require hands-on client work for certification.
- **CEUs and Recertification:** ISSA provides continuing education units (CEUs) and supports recertification, making it attractive for ongoing professional development<sup>[9]</sup>. IFBB does not specify CEUs or recertification pathways.

• **Industry Focus:** ISSA is broader, covering strength & conditioning, nutrition, and business skills, making it suitable for personal trainers and strength coaches<sup>[5][6]</sup>. IFBB is more focused on bodybuilding and elite fitness coaching.

#### Summary

**ISSA's Elite Coach Course (with Strength & Conditioning and Bodybuilding focus)** is ideal for those seeking broad, accredited fitness credentials with practical experience, business skills, and ongoing professional development. **IFBB's Master Bodybuilding & Fitness Degree** is best for those who want deep, specialized knowledge in bodybuilding and fitness coaching, with recognition from a leading bodybuilding authority. Both are reputable choices, but their suitability depends on career goals and preferred industry focus.



# How does the focus on bodybuilding differ between ISSA's certification and strength&conditioning courses

The focus on bodybuilding in ISSA's bodybuilding certification versus their strength & conditioning courses differs primarily in specialization, content emphasis, and practical application.

#### **ISSA Bodybuilding Certification**

• **Specialization:** The ISSA Bodybuilding Certification is specifically designed for those who want to train bodybuilding clients or athletes aiming for muscle hypertrophy, physique enhancement, and stage competition[10][11][12].

#### Content:

- o **Muscle Hypertrophy:** Deep focus on muscle growth science, programming for hypertrophy, and advanced training techniques<sup>[11][13]</sup>.
- o **Training Techniques:** Emphasis on maximizing muscle gains, including the use of compound lifts (squat, press, deadlift), mind-muscle connection, and periodization<sup>[11]</sup>.

- o **Nutrition and Supplementation:** Comprehensive modules on nutrition, supplementation, meal planning, and recovery strategies tailored to bodybuilding goals<sup>[10][11]</sup>.
- o **Competition Preparation:** Specializations available for stage presentation, peak week strategies, and posing<sup>[10]</sup>.
- o **Client Assessment:** Focus on individualizing programs for physique enhancement and competition readiness<sup>[10]</sup>.
- **Practical Application:** Encourages hands-on experience with bodybuilding clients, including internships or personal training, to apply theoretical knowledge in real-world scenarios<sup>[10]</sup>.

#### **ISSA Strength & Conditioning Certification**

• **Specialization:** The Strength & Conditioning course is broader, targeting athletes across various sports who need to improve strength, power, speed, and sport-specific performance<sup>[14]</sup>.

#### Content:

- o **Exercise Science:** Focus on the science behind movement, force, and conditioning for athletic performance<sup>[14]</sup>.
- o **Program Design:** Teaches how to create training programs that enhance athletic results, not just muscle size or aesthetics<sup>[14]</sup>.
- o **Sport-Specific Adaptation:** Covers how to tailor strength and conditioning to the demands of different sports, including tactical athletes and powerlifters<sup>[14]</sup>.
- o **Injury Prevention and Recovery:** While present, the focus is more on sport performance and less on physique or bodybuilding-specific outcomes<sup>[14]</sup>.
- **Practical Application:** Emphasizes working with athletes to achieve sport-related goals, rather than focusing on muscle hypertrophy or stage preparation<sup>[14]</sup>.

#### **Key Differences**

Aspect	ISSA Bodybuilding Certification	ISSA Strength & Conditioning Certification
Primary Focus	Muscle hypertrophy, physique, competition	Strength, power, speed, sport performance

Training Techniques	Compound lifts, periodization, mind-muscle	Sport-specific, force production, conditioning
Nutrition Focus	Bodybuilding-specific, supplementation	General athletic nutrition, less on supplements
Client Type	Bodybuilders, physique athletes, competitors	Athletes in various sports, tactical athletes
Practical Application	Bodybuilding clients, stage prep, posing	Sport performance, athletic testing, conditioning

#### **Summary**

**ISSA's bodybuilding certification** is tailored for those who want to specialize in muscle hypertrophy, physique transformation, and competition preparation, with a curriculum and practical training focused on bodybuilding-specific outcomes<sup>[10][11][12]</sup>. **ISSA's strength & conditioning course** is broader, designed for athletes across different sports, emphasizing strength, power, and conditioning for improved athletic performance rather than physique or bodybuilding competition<sup>[14]</sup>.



# Online Course: Master Bodybuilding & Fitness Degree, can it HELP a karate expert?

The **Online Course: Master Bodybuilding & Fitness Degree** is primarily designed to deepen expertise in bodybuilding, fitness coaching, and the science of weight training, with a curriculum that covers kinesiology, anatomy, biomechanics, injury risk mitigation, and tailored workout design<sup>[15][16][17]</sup>. While its main focus is on muscle hypertrophy, strength, and physique enhancement—core components of bodybuilding—the knowledge and skills gained can be highly relevant to karate practitioners and experts.

#### How Can This Course Help a Karate Expert?

#### • Strength and Power Development:

The course provides advanced training in strength and power, which are crucial for improving striking force, overall athleticism, and injury resilience in karate<sup>[18][19]</sup>.

#### Injury Prevention and Mobility:

With a strong emphasis on technique, safety, and injury risk mitigation, the course teaches how to design programs that protect joints and muscles—important for martial artists who face repetitive movements and high-impact training<sup>[15][16]</sup>.

#### Flexibility and Conditioning:

While bodybuilding programs may not focus as much on flexibility as karate does, understanding anatomy and biomechanics helps karate experts integrate strength training without sacrificing mobility<sup>[15][16]</sup>.

#### • Tailored Programming:

The course equips participants with the ability to customize workouts for specific goals. A karate expert could use this knowledge to develop strength and conditioning routines that complement their martial arts training, rather than hinder it[15][16].

#### Nutrition and Recovery:

Nutrition modules can help karate practitioners optimize performance, manage weight, and recover more effectively from training [15][16].

#### Considerations

#### Martial Arts vs. Bodybuilding Focus:

Bodybuilding training prioritizes muscle size and symmetry, while karate emphasizes functional strength, endurance, agility, and technique<sup>[20][18]</sup>. However, the course's principles of progressive overload, periodization, and safe training are applicable to any athlete.

#### • Practical Application:

A karate expert may need to adapt bodybuilding techniques to suit the demands of martial arts, focusing more on functional strength, explosive power, and endurance rather than pure hypertrophy<sup>[18][19]</sup>.

#### Summary

Yes, the Master Bodybuilding & Fitness Degree can help a karate expert by providing advanced knowledge in strength training, injury prevention, and program

design—skills that can enhance performance, reduce injury risk, and support overall athletic development. However, the karate expert should adapt the bodybuilding principles to prioritize functional strength and mobility relevant to martial arts<sup>[15][16][18]</sup>.



### Online Course: Master Bodybuilding & Fitness Degree, what textbooks do they use?

The **Online Course: Master Bodybuilding & Fitness Degree** from IFBB does not publicly specify a list of required or recommended commercial textbooks for purchase. Instead, the course provides all educational material directly as PDF files, which are the property of IFBB and included with enrollment [21][22]. These materials are carefully prepared by renowned professors and world champion athletes and cover the full curriculum, including topics such as kinesiology, biomechanics, anatomy, injury risk mitigation, and tailored workout design[21][22].

Additionally, the IFBB Academy references the **IFBB College Book** as its official reference guide, which may be used in some IFBB Academy offerings, but it is not explicitly stated as a required textbook for every Master Bodybuilding & Fitness Degree course<sup>[23]</sup>. Some versions of the course (such as those from IFBB Academy USA) supplement PDFs with short video classes, but again, no external textbooks are required<sup>[22]</sup>.

#### **Summary:**

The course is self-contained, with all essential materials provided as PDFs by IFBB. No external textbooks are necessary for completion unless specifically noted by your course provider. The IFBB College Book is the official reference and may be used in some contexts, but it is not a universal requirement for the Master Bodybuilding & Fitness Degree<sup>[21][22][23]</sup>.

### What textbooks or scientific materials are used in the Master Bodybuilding & Fitness Degree course

The **Master Bodybuilding & Fitness Degree** course provided by IFBB Academy does not require students to purchase or use any specific commercial textbooks or scientific materials. Instead, all essential curriculum content is delivered as proprietary PDFs and, in some versions, supplemented with short video lessons. These materials are created by IFBB's team of experts and cover the full range of necessary topics—such as anatomy, biomechanics, kinesiology, nutrition, program design, and injury prevention—without the need for external books<sup>[24][25]</sup>.

#### Official Materials:

- **IFBB College Book:** This is referenced as the official resource for some IFBB Academy courses, but it is not universally required for every Master Bodybuilding & Fitness Degree offering. It is typically provided as part of the course materials if needed<sup>[24]</sup>.
- **Proprietary PDFs and Videos:** The main study materials are custom-created by IFBB and included with enrollment<sup>[24][25]</sup>.

#### **No External Textbooks Required:**

Students are not expected to buy or use any third-party textbooks or scientific publications, such as those commonly recommended in exercise science or kinesiology programs (e.g., *McArdle's Exercise Physiology, The Science and Practice of Strength Training* by Zatsiorsky, or *Bodybuilding Anatomy* by Human Kinetics)<sup>[26][27]</sup>. These may be useful for additional learning but are not part of the official course requirements.

#### **Summary:**

The Master Bodybuilding & Fitness Degree course is self-contained, with all necessary scientific and educational materials provided directly by IFBB. No external textbooks or scientific materials are required for successful completion<sup>[24][25]</sup>.



1. <a href="https://ifbb-academy.com/product/online-course-master-bodybuilding-fitness-degree/">https://ifbb-academy.com/product/online-course-master-bodybuilding-fitness-degree/</a>

- 2. https://www.ifbbacademyusa.com/shop/master-bodybuilding-fitness-degree-course-48
- 3. <a href="https://www.ptpioneer.com/personal-training/certifications/best-bodybuilding-coach-certification/">https://www.ptpioneer.com/personal-training/certifications/best-bodybuilding-coach-certification/</a>
- 4. <a href="https://www.exercise.com/grow/issa-bodybuilding-certification-review/">https://www.exercise.com/grow/issa-bodybuilding-certification-review/</a>
- 5. <a href="https://www.ptpioneer.com/personal-training/certifications/strength-and-conditioning-certifications/">https://www.ptpioneer.com/personal-training/certifications/strength-and-conditioning-certifications/</a>
- 6. https://www.issaonline.com/certification/strength-and-conditioning-certification
- 7. <a href="https://www.issaonline.com/certification/elite-trainer-certification">https://www.issaonline.com/certification/elite-trainer-certification</a>
- 8. <a href="https://www.reddit.com/r/personaltraining/comments/1gys2ua/">https://www.reddit.com/r/personaltraining/comments/1gys2ua/</a> issa elite trainer bundle questions on courses/
- 9. <a href="https://www.ptpioneer.com/personal-training/certifications/best-bodybuilding-coach-certification/">https://www.ptpioneer.com/personal-training/certifications/best-bodybuilding-coach-certification/</a>
- 10. <a href="https://www.exercise.com/grow/issa-bodybuilding-certification-review/">https://www.exercise.com/grow/issa-bodybuilding-certification-review/</a>
- 11. https://www.ptpioneer.com/personal-training/certifications/issa-bodybuilding-specialist-review/
- 12. https://traineracademy.org/certifications/issa-bodybuilding-coach-review/
- 13. https://www.issaonline.com/blog/post/whats-the-best-bodybuilding-coach-certification
- 14. <a href="https://www.issaonline.com/certification/specializations">https://www.issaonline.com/certification/specializations</a>
- 15. https://www.ifbbacademyusa.com/shop/master-bodybuilding-fitness-degree-course-48
- 16. https://ifbb-academy.com/product/online-course-master-bodybuilding-fitness-degree/
- 17. <a href="https://ifbb-academy.com">https://ifbb-academy.com</a>
- 18. <a href="https://www.youtube.com/watch?v=TPQGp6DDasc">https://www.youtube.com/watch?v=TPQGp6DDasc</a>
- 19. <a href="https://www.reddit.com/r/martialarts/comments/t9lptm/correlation\_between\_body\_building\_and\_martial\_arts/">https://www.reddit.com/r/martialarts/comments/t9lptm/correlation\_between\_body\_building\_and\_martial\_arts/</a>
- 20. https://kenzendo.com/blog/karate-training-advantages-in-chevy-chase/
- 21. https://ifbb-academy.com/product/online-course-master-bodybuilding-fitness-degree/
- 22. https://www.ifbbacademyusa.com/shop/master-bodybuilding-fitness-degree-course-48

- 23. https://ifbbacademyoman.com/ifbb-college-book/
- 24. https://ifbb-academy.com/product/online-course-master-bodybuilding-fitness-degree/
- $25. \underline{\text{https://www.ifbbacademyusa.com/shop/master-bodybuilding-fitness-degree-course-48}}$
- 26. <a href="https://www.reddit.com/r/AdvancedFitness/comments/5cq9dt/reading\_list\_for\_exercise\_sciencekinesiology/">https://www.reddit.com/r/AdvancedFitness/comments/5cq9dt/reading\_list\_for\_exercise\_sciencekinesiology/</a>
- 27. <a href="https://us.humankinetics.com/products/bodybuilding-anatomy">https://us.humankinetics.com/products/bodybuilding-anatomy</a>